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Attorneys for Petitioner
CITY OF MILLBRAE

BEFORE THE

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of the City of Millbrae's Petition for Review of Action and Failure to Act by the California Regional Water Quality Control Board, San Francisco Bay Region, in Adopting Order No. R2-2008-0071 and Waste Discharge Requirements for the City of Millbrae.	SWRCB/OCC File _____ PETITION FOR REVIEW; PRELIMINARY POINTS AND AUTHORITIES IN SUPPORT OF PETITION (Wat. Code, § 13320)

The City of Millbrae ("City" or "Petitioner") hereby petitions the State Water Resources Control Board ("State Water Board") in accordance with Water Code section 13320 for review of Order No. R2-2008-0071 of the California Regional Water Quality Control Board, San Francisco Bay Region ("Regional Water Board"), reissuing the National Pollution Discharge Elimination System ("NPDES") Permit No. CA0037532 ("Permit"), adopted by the Regional Water Board on August 13, 2008. The issues and a summary of the bases for the Petition follow. Petitioner

reserves the right to file a more detailed Statement of Points and Authorities in support of its Petition when the full administrative record is available, and any other material has been submitted.[1]

The City owns and operates a wastewater treatment plant (also known as a Publicly-Owned Treatment Works, or "POTW") located at 400 East Millbrae Avenue in the City of Millbrae, San Mateo County, California. The plant serves the City and provides secondary treatment of wastewater. The collection system includes approximately 53 miles of sanitary sewer lines and 3 pump stations.

The City's POTW has an average dry weather design flow of 3.0 million gallons per day ("mgd") and a maximum wet weather design flow of 9 mgd. The plant provides secondary treatment of all flows in dry and wet weather.

Like many Bay Area POTW's, the City has a long history of working cooperatively with the Regional Water Board to achieve the common goal of protecting water quality in the San Francisco Bay. The City commends the Regional Water Board staff for addressing many complex technical and legal issues in a professional manner and attempting to address several of the City's concerns with the Permit as originally issued. Despite the Regional Water Board's efforts, however, the provisions relating to dioxins in the adopted Permit are unlawful and inappropriate. The costs of complying with the contested Permit provisions are potentially staggering for a small city. Thus, despite the City's preference to attempt to address these issues regionally and cooperatively, the City has no choice but to file this Petition to protect the interests of its residents and ratepayers.

[1] The State Water Board's regulations require submission of a statement of points and authorities in support of a petition (Cal. Code Regs., tit. 23, § 2050(a)(7)), and this document is intended to serve as a preliminary memorandum. However, it is not possible to prepare a complete statement and memorandum in the absence of the complete administrative record, which is not yet available.

1. NAME AND ADDRESS OF PETITIONER:

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Millbrae, CA 94030
Attn: Khee Lim, City Engineer
Telephone: (650) 259-2347
Email: klim@ci.millbrae.ca.us

In addition, all materials in connection with this Petition should be provided to the City's counsel at the following addresses:

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2. THE SPECIFIC ACTION OR INACTION OF THE REGIONAL WATER BOARD WHICH THE STATE WATER BOARD IS REQUESTED TO REVIEW:

The City seeks review of Order No. R2-2008-0071, reissuing the NPDES Permit for the City. A copy of the Permit is attached as Exhibit A. The specific requirements of the Permit that the City requests the State Water Board review are:

A. The imposition and derivation of effluent limitations for dioxin toxicity equivalents ("dioxin-TEQ").

B. Inclusion of compliance schedule requirements for additional source control and additional actions.

C. Inclusion of reference to use of mass offsets to meet the dioxin-TEQ limit where no such program exists.

3. THE DATE ON WHICH THE REGIONAL WATER BOARD ACTED OR REFUSED TO ACT:

The Regional Water Board adopted the Permit on August 13, 2008.

4. STATEMENT OF REASONS WHY THE REGIONAL WATER BOARD'S ACTION WAS INAPPROPRIATE OR IMPROPER:

A. The Regional Water Board Improperly Imposed Numeric Effluent Limitations for Dioxin-TEQ

The Permit contains concentration limits for dioxin-TEQ. Similar limits have been challenged by other dischargers and the Bay Area Clean Water Agencies ("BACWA") in previous administrative and court appeals. However, collectively, these appeals have not yielded an acceptable resolution of the appropriate manner of regulating dioxin in municipal effluents. As a consequence, the legal and technical issues remain, final effluent limits have been issued, and timelines for compliance under the Permit have now been established. The final numeric water quality-based effluent limitations ("WQBELs") for dioxin included in the Permit are contrary to the requirements of the Clean Water Act ("CWA") and State law. Compliance with dioxin-TEQ numeric limitations is infeasible and could result in the City having to construct expensive new treatment facilities or otherwise spend scarce public funds on new technologies without reasonable promise that even these costly improvements will allow the City to meet these limits. This waste of resources is neither reasonable nor required by State or federal law.

(1) The Regional Water Board Improperly Utilized the Basin Plan's Narrative Objective for Bioaccumulation to Justify the Imposition of a Dioxin-TEQ Limit

a. The City's Discharge Contains Dioxin-TEQ that is Uncontrollable and Therefore There is no Reasonable Potential to Exceed the Bioaccumulation Narrative Objective

In adopting the numeric effluent limitations for dioxin-TEQ, the Regional Water Board claims that the narrative bioaccumulation water quality objective ("WQO") in the Water Quality Control Plan for the San Francisco Bay Region ("Basin Plan") requires limits to protect against unsafe levels of dioxin in fatty tissue of fish and other organisms. (See Permit, Exh. A, at

pp. F-6 – F-28.) The Basin Plan contains no numeric objectives set to define acceptable levels of these constituents in fish tissue or sediment. The California Toxics Rule ("CTR") contains numeric criteria only for a single dioxin congener, 2,3,7,8-tetrachloro-dibenzo-P-dioxin ("TCDD"). There are no adopted numeric water quality criteria or objectives for other congeners of dioxin or dioxin-TEQ. In this case, the Regional Water Board has imposed numeric water quality criteria for dioxin-TEQ translated from the narrative bioaccumulation WQO.

The bioaccumulation objective provides:

> Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish or other aquatic organisms. ***Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.*** Effects on the aquatic organisms, wildlife, and human health will be considered. (Basin Plan at § 3.3.2, p. 57, emphasis added.)

Controllable water quality factors are defined as "those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the state and that may be reasonably controlled." (Basin Plan at § 3.1, p. 56.) The State Water Board has determined that the "'controllable' requirement ... distinguish[es] between unidentifiable background sources and identifiable point and non-point sources associated with human activities that can be controlled ... :" (*In the Matter of the Petitions of East Bay Municipal Utility District and Bay Area Clean Water Agencies*, State Water Board Order WQO 2002-0012 (July 18, 2002) ("WQO 2002-0012").)[2] Because the water quality objective applies specifically to controllable water quality factors, and the controllable water quality factors are defined to include only human activities that may reasonably be identified and controlled, the Regional Water Board must consider only controllable factors in its determination of reasonable potential. Effluent limitations are then required if the discharge is at a level that "will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." (40 C.F.R. § 122.44(d)(1)(i).)

[2] The Petitioner's argument herein is not inconsistent with the State Water Board's opinion in WQO 2002-0012. In the petition that led to that order, the petitioners argued that the narrative bioaccumulation WQO did not apply at all because the discharges were uncontrollable. In this case, we contend that the Regional Water Board may only consider the controllable portion of dioxin-TEQ in its reasonable potential analysis, not that the narrative bioaccumulation WQO does not apply.

In other words, to determine whether the City's discharge has reasonable potential to cause an excursion above the bioaccumulation objective, the Regional Water Board had to consider if the dioxin-TEQ in the City's discharge "that may reasonably be controlled" was contributing to bioaccumulation of toxic substances. In this case, the Regional Water Board conducted its reasonable potential analysis based solely on water quality data without regard to controllability of dioxin-TEQ in the City's discharge. (See Permit, Exh. A, at pp. F-26 – F-28.) Thus, the Regional Water Board staff inappropriately ignored the actual text of the WQO it purported to implement. Had the Regional Water Board considered "controllability" it is unlikely that it would have found reasonable potential. For example, in previous permits, the Regional Water Board has acknowledged that the presence of dioxin is most likely beyond the control of a POTW and is attributable to unidentified background sources. (See Waste Discharge Requirements for Central Contra Costa Sanitary District, Order No. R2-2007-008 at p. F-31, (excerpted in Exh. B, attached hereto).) The level of dioxin-TEQ in the City's discharge is not "reasonably controlled," and therefore the discharge does not have "reasonable potential" to cause or contribute to an exceedance of an applicable WQO. In the absence of reasonable potential, there is no federal regulatory requirement for the imposition of numeric effluent limitations in the City's NPDES Permit. Thus, the Regional Water Board has inappropriately applied the narrative bioaccumulation objective to the City's discharge, which has resulted in the improper adoption of effluent limitations for dioxin-TEQ. Because the numeric effluent limitations have been adopted improperly, they should be removed from the Permit.

b. Even if the Regional Water Board Properly Found Reasonable Potential, the Bioaccumulation WQO Cannot be Used to Impose Effluent Limitations More Stringent than the Amount of Dioxin-TEQ that can be Reasonably Controlled

The Regional Water Board did not properly conduct its reasonable potential analysis because the Regional Water Board failed to consider only the amount of controllable dioxin-TEQ in the City's discharge. Even if the Regional Water Board could properly find reasonable potential, the language of the bioaccumulation narrative WQO prohibits the Regional Water Board from adopting numeric effluent limitations that cannot be attained through reasonable

controls. As stated above, the narrative objective specifically states, "controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life." (Basin Plan at § 3.3.2, p. 57.) Thus, to the extent that reasonable potential exists, the corresponding effluent limitations shall be limited to the amount of dioxin-TEQ that can be achieved by restricting "controllable water quality factors."

The Permit includes effluent limits for 2,3,7,8-TCDD TEQ of 0.014 pg/L and 0.028 pg/L, as an average monthly and daily maximum respectively. These limits go far beyond the level of pollution control provided by current technology and pretreatment source control programs. The fact that POTWs may reduce dioxin discharges "in part" cannot bring effluent limitations of unlimited stringency within the ambit of a WQO that is explicitly limited to "controllable water quality factors." Thus, the City cannot be required to do the impossible—to remove the uncontrollable 2,3,7,8-TCDD TEQ "part" from its effluent.

The Regional Water Board has acknowledged at several recent permit hearings that the main source of dioxin in influent is "beyond the [POTW's] control" and that compliance with the 2,3,7,8-TCDD TEQ effluent limitations could be overly-burdensome and would not be cost effective for the benefits received.[3] Thus, the argument is not over the attainability of the limitations; rather, the issue is whether the narrative bioaccumulation objective may be read to allow overly-burdensome regulation without regard to its feasibility or cost. On its face, the objective does not support such a strained reading.

(2) The Regional Water Board Has Failed to Conduct the Requisite "Case-By-Case Analysis" for Regulating Uncontrollable Water Quality Factors

The Basin Plan states that when "uncontrollable water quality factors result in the degradation of water quality beyond the levels or limits established herein as water quality objectives, the Regional Board will conduct a case-by-case analysis of the benefits and costs of preventing further degradation." (Basin Plan at § 3.1, pp. 55-56.) Because the exceedance of the narrative bioaccumulation narrative WQO is caused by uncontrollable water quality factors, the

[3] See Exhibit B, Order No. R2-2007-008, Central Contra Costa Sanitary District at p. F-31; see transcript of hearing on Order No. R2-2007-008, held on January 23, 2007, on file with the State Water Board.

Regional Water Board must conduct a case-by-case analysis of the benefits and costs of preventing further degradation. In the City's case, no such analysis has been conducted to determine if the benefits of meeting the effluent limitations in the City's Permit outweigh the costs that the City will be forced to endure if the effluent limitations remain. Until such a study is completed, the Regional Water Board cannot impose effluent limits for 2,3,7,8-TCDD TEQ in the City's Permit, as doing so violates the Basin Plan.

The Regional Water Board argues that the United States Environmental Protection Agency's ("EPA") inclusion of San Francisco Bay on the 303(d) list as impaired by dioxins resolves the issue of whether the effluent limitations in the City's permit regulate "controllable water quality factors." (See Response to Written Comments of Regional Water Quality Control Board (January 16, 2007), for January 23, 2007 hearing on permit of Central Contra Costa Sanitary District (Order No. R2-2007-008) at pp. 5-6 (excerpted in Exh. C, attached hereto).) A listing of impairment, however, is a preliminary determination that a water body is not meeting standards and does not address the issue of controllability.[4]

A listing of impairment under CWA section 303(d) means only that implementation of technology-based effluent limitations are "not stringent enough to implement any water quality standard applicable to such waters." (33 U.S.C. § 1313(d)(1)(A).) The fact that the San Francisco Bay is listed as impaired for dioxins indicates only that the existing technology-based effluent limitations are not stringent enough to meet the narrative bioaccumulation WQO, as interpreted by the Regional Water Board and EPA. The 303(d) listing does not itself indicate if the impairment is caused by controllable or uncontrollable sources, nor does the listing reveal whether more stringent effluent limitations for dioxins in POTW permits are warranted. Similarly, the State Water Board has found that placement of a constituent on the 303(d) list alone is not sufficient evidence that a permit limit is warranted. (*In the Matter of the Review on its Own Motion of Waste Discharge Requirements for the Avon Refinery*, Order WQ 2001-06

[4] The State Water Board has acknowledged this in its Total Maximum Daily Load ("TMDL") policy, noting that impairments may be due to natural factors, which are by definition not controllable. (State Water Board Resolution 2005-0050, "Adoption of the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options.")

(March 7, 2001) ("Tosco Order") at p.17.) Contrary to the Regional Water Board's assertion, a 303(d) listing clearly does not absolve the Regional Water Board from its obligation to conduct a case-by-case analysis in accordance with the Basin Plan.

In the case of dioxins in the San Francisco Bay, the Regional Water Board has identified the primary source of dioxins and furans in the Bay Area to be air emissions from combustion sources. (See *Dioxins in San Francisco Bay: Conceptual Model/Impairment Assessment, January 20, 2005*, prepared by the San Francisco Estuary Institute for the Clean Estuary Partnership, or "CEP.")[5] In fact, the EPA Region 9 website indicates that the agency estimates that only 2% of the dioxins in San Francisco Bay come from POTWs.[6] Considering the small amount of dioxin in POTW discharges, and the considerable questions regarding the ability of POTWs to control dioxins in effluent, it is imperative that the Regional Water Board conduct the case-by-case analysis to evaluate the benefits versus the costs of compliance with effluent limitations for dioxin-TEQ. Until such an analysis is conducted, as required by the Basin Plan, the Regional Water Board may not impose effluent limitations in the Permit for dioxins at a level that exceeds the City's ability to control the amount of dioxin in the discharge.

(3) The Use of 2,3,7,8-TCDD Equivalents (or Dioxin-TEQs) for Determining Reasonable Potential and Adopting Water Quality-Based Effluent Limitations is Inconsistent with State Policy.

The CTR contains numeric water quality criteria for one type of dioxin, 2,3,7,8-TCDD. (40 C.F.R. § 131.38(b)(1).) In addition to this compound, there are other compounds referred to as congeners that exhibit toxic effects similar to those of 2,3,7,8-TCDD. As noted above, there are no adopted numeric water quality criteria for the other dioxin congeners in the CTR or in the Basin Plan. In the preamble to the CTR, EPA encourages the regulation of other dioxins and dioxin-like compounds through the use of TEQs when there is reasonable potential to cause or contribute to a violation of a narrative WQO. (65 Fed. Reg. 31682 (May 18, 2000).) The CTR

[5] The Regional Water Board was a member of the CEP when this document was completed.

[6] http://www.epa.gov/docs/region09/water/dioxin/sfbay.html [as of August 31, 2008].

does not mandate or require California to use dioxin-like compounds, or the TEQ-scheme, to determine reasonable potential and require effluent limitations for narrative objectives.

To implement the CTR, the State Water Board adopted the State's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* ("SIP"). The SIP contains specific provisions regarding 2,3,7,8-TCDD equivalents (i.e., dioxin-TEQs). (SIP at pp. 28-29.) The SIP requires monitoring for the dioxin-like compounds. The SIP does not direct the Regional Water Boards to use the dioxin-like compounds to determine reasonable potential for narrative objectives. In fact, the State Water Board purposefully declined to implement the CTR criteria for 2,3,7,8-TCDD equivalents. "In the Implementation Policy, the Board considered implementing the CTR criteria for 2,3,7,8-TCDD as TCDD equivalents. Instead, the Board decided to implement the 2,3,7,8-TCDD criteria and to require only monitoring for the remaining 16 dioxin and furan congeners." (Tosco Order at p. 47.) The primary reason for requiring only monitoring was the ubiquitous nature of the congeners and the uncertainty regarding sources and control measures. (*Ibid.*) In other words, the State Water Board, in its implementation policy, specifically considered and rejected the regulatory scheme encouraged—but not required—by EPA in the preamble to the CTR.

The SIP establishes implementation procedures for priority toxic pollutants contained in the CTR; the SIP requires only monitoring for 2,3,7,8-TCDD equivalents. Thus, the Regional Water Board's action to regulate the City's discharge through dioxin-TEQs is inconsistent with State policy. To ensure consistency with State policy and the regulation of dioxins by other Regional Water Boards, the State Water Board should remove the effluent limitations for dioxin-TEQs from the Permit, or in the alternative, remand the Permit to the Regional Water Board with direction to remove the effluent limitations for dioxin-TEQs.

(4) The Imposition of Effluent Limitations for 2,3,7,8-TCDD TEQ More Stringent than Required to Implement the Bioaccumulation Objective is Subject to Water Code Sections 13241 and 13242

The effluent limitations for 2,3,7,8-TCDD TEQ in the Permit go beyond what is required to implement the bioaccumulation narrative WQO, which requires limitations on controllable water quality factors. Thus, in imposing the effluent limitations, the Regional Water Board is

establishing new permit-specific WQOs. When the Regional Water Board adopts WQOs, it must comply with State law. In particular, the Regional Water Board is required to consider a number of factors and prepare a program of implementation for the objectives. (Wat. Code, §§ 13241 and 13242.) The provisions of Water Code section 13241 apply without regard to whether the WQO is adopted as part of a Basin Plan amendment or as a basis for establishing water quality-based effluent limitations in a NPDES permit.

> A RWQCB may choose, on a case-by-case basis, however, to establish water quality-based effluent limitations, which are more stringent than limitations based upon the applicable water quality objectives where necessary to protect beneficial uses or prevent nuisance.... If a RWQCB takes this approach, the rationale for the more stringent limitations must be explained in the permit findings, which must be supported by evidence in the record.... In addition, the RWQCB must consider the factors specified in Water Code Section 13241, which apply to the adoption of water quality objectives on a permit-specific basis. (*In the Matter of the Petition of City and County of San Francisco, et al.*, State Water Board Order WQ 95-4 (Sept. 21, 1995) at pp. 12-13, citations and footnotes omitted; see also *In the Matter of the Petition of the Cities of Palo Alto, et al.*, State Water Board Order WQ 94-8 (Sept. 22, 1994) at p. 3; *Southern Cal. Edison Co. v. State Water Resources Control Bd.* (1981) 116 Cal.App.3d 751, 759-761.)

The Regional Water Board acted improperly, inappropriately and illegally when it failed to consider the factors listed in section 13241 and failed to prepare a program of implementation for 2,3,7,8-TCDD TEQ. Moreover, the Permit did not include findings explaining why it is necessary to impose effluent limitations more stringent than required by the bioaccumulation objective.

By imposing effluent limitations for 2,3,7,8-TCDD that are more stringent than required by the narrative bioaccumulation objective, the Regional Water Board imposed effluent limits that are more stringent than required by federal law. The Regional Water Board has identified the narrative bioaccumulation objective as the "applicable water quality standard" relevant to the effluent limitations for 2,3,7,8-TCDD in the City's Permit. (Permit at p. F-26.) As explained above, because the effluent limitations require the City to remove 2,3,7,8-TCDD that does not come from controllable water quality factors, the effluent limitations are more stringent than the narrative bioaccumulation objective, and therefore more stringent than federal law. When imposing effluent limitations that are more stringent than federal law, the Regional Water Board must consider the factors listed in Water Code section 13241. (*City of Burbank v. State Water*

Resources Control Bd. (2005) 35 Cal.4th 613, 625-627.) If the economic impact of the effluent limitations would be severe, the limitations must be made less stringent. (*Id.* at p. 626, fn. 7 ["State law, as we have said, allows a regional board to consider a permit holder's compliance cost to *relax* pollutant concentrations, as measured by numeric standards, for pollutants in a wastewater discharge permit."] Emphasis added.)

For the reasons stated above, the final effluent limitations for 2,3,7,8-TCDD TEQ in the Permit are inappropriate and invalid. The Regional Water Board has not made sufficient findings regarding the need for the effluent limitations, which are not supported by evidence in the record.

In light of these infirmities, the State Water Board should remove the 2,3,7,8-TCDD TEQ concentration limits from the Permit. At a minimum, the Permit should be remanded to the Regional Water Board with direction to either eliminate the 2,3,7,8-TCDD TEQ concentration limits from the Permit, or to analyze whether there is reasonable potential for 2,3,7,8-TCDD TEQ in light of the actual language of the bioaccumulation objective. The Regional Water Board should further be directed to, if it finds reasonable potential for 2,3,7,8-TCDD TEQ, conduct the cost/benefit analysis required by the Basin Plan. Based on that analysis, the Regional Water Board should calculate effluent limitations based on the actual language of the bioaccumulation objective or conduct the analysis required under Water Code sections 13263 and 13241, if it decides to adopt effluent limitations that are more stringent than the Basin Plan and federal law.

B. The Regional Water Board Improperly Relied on the Use of a Non-Existent Mass Offset Program for Meeting the 303(d)-Listed Pollutant Limits.

The Permit provides that a discharger may seek approval of a mass offset plan to reduce 303(d)-listed pollutants, if the discharger can demonstrate that the net reduction of total mass loadings of such pollutants cannot be achieved through economically feasible measures "such as aggressive source control, wastewater reuse, and treatment plant optimization." (Permit, Exh. A, at p. 16.) This reference to an optional offset program, as an alternative to compliance with final end-of-pipe limitations for dioxin-TEQ, is illusory, as no program for such offsets currently exists. This provision potentially obscures the inappropriateness of including final effluent limits which all parties recognize cannot be met, and for which Mandatory Minimum Penalties may be

imposed in the not too distant future. As the State Water Board has discovered through its as-yet unfruitful efforts to develop an offset program for mercury in the San Francisco Bay and Delta, there are tremendous challenges to develop such an offset program that would survive both regulatory and legal reviews. Reference to such a non-existent program as though it were a viable alternative that can be readily implemented by the City is misleading and should not be considered by the State Water Board as adequately mitigating the harsh effect of inclusion in permits of the final limits for dioxin-TEQ.

C. The Regional Water Board Improperly Imposed Compliance Schedule Action Plans in the Permit

The improperly imposed effluent limitations for dioxin-TEQ are accompanied by compliance schedules in the Permit (Permit, Exh. A, at p. 22). These limitations, and the associated compliance schedules, ignore the fact that wastewater treatment plant effluents have been identified as non-significant sources of these pollutants. (See, e.g., *Dioxins in San Francisco Bay: Conceptual Model/Impairment Assessment, January 20, 2005.*) Dioxin-TEQ's are being addressed on a watershed basis through the development of a TMDL that will appropriately resolve beneficial use concerns for the San Francisco Bay. Despite the fact that the City's options to comply with the final effluent limitations are extremely limited, and that any actions taken by the City in the interim before the TMDL is completed will make no discernable difference in Bay water quality, the Permit and the CDO require specific and overly-burdensome compliance actions for dioxin-TEQ's.

The Permit requires the City to identify and implement source control measures to reduce concentrations of dioxin-TEQ to the treatment plant, and implement additional actions to reduce the dioxin-TEQ concentration if source control is not effective in reducing the concentration. (Permit, Exh. A, at p. 22.) The dioxin congeners found in fish tissue samples, which form the basis for the dioxin 303(d) listing, are different than the congeners detected in POTWs. Given that the sources of dioxin are uncontrollable by municipal wastewater treatment plants and are primarily introduced through air deposition, the compliance requirements for dioxin reduction in the effluent will have an exceedingly small, if any, effect on the concentrations of dioxin

congeners found in fish tissue. In an analogous situation, EPA's action to permit a new discharge into an already impaired water body was upheld by the U.S. Supreme Court because EPA determined that the discharge would not produce a detectable violation of State water quality standards. (See *Arkansas v. Oklahoma* (1992) 503 U.S. 91.) By comparison here, the City, an existing discharger, is being required to undertake costly actions set forth in the compliance schedule provisions and reduce a pollutant in wastewater that is uncontrollable and insignificant (i.e., de minimis). The two positions are not reconcilable. In the first instance, the Supreme Court held that a new discharge to a water body was permissible because the impact on water quality would be de minimis. Yet, in this case, the permit requires lowering of an admittedly de minimis discharge to levels beyond de minimis. Given the *insignificance of the City's contribution of dioxins*, a de minimis exception from further reductions is appropriate in this case. (See *Ober v. U.S. EPA* (9th Cir. 2001) 243 F.3d 1190, 1195 ["de minimis exemption is allowed for regulation yielding trivial gain."].)

5. THE MANNER IN WHICH THE PETITIONER IS AGGRIEVED:

The City is aggrieved as the Permit holder subject to conditions and limitations which are more stringent or onerous than required by or provided for under current law. Accordingly, the City will be required to expend portions of its limited public assets to comply with inappropriate or unlawful Permit conditions for 2,3,7,8-TCDD TEQ, as well as spending funds for inappropriate compliance schedule action plan requirements related to source control and its capital improvement program, and investigating use of a non-existent mass offset program. Given that the City's resources are limited, it is aggrieved when it is compelled to expend those resources to comply with requirements that are arbitrary, unnecessary and not required by law. This harm is exacerbated by the fact that these additional efforts are extremely unlikely to provide for measurable betterment to the water quality of the Bay. The challenged limits may also require the City to investigate or undertake the use of mass offset programs which will siphon off resources that could be more appropriately used for improving water quality in other ways. Whether mass offset programs will result in any useful solution is highly speculative, as such programs may not be implemented, or if implemented, thereafter be found to be inconsistent with

applicable law and regulation. The City is further aggrieved by the inclusion of each of the unlawful and excessive Permit conditions with which it cannot now, or in the immediate future, comply, because it will be subject to penalties and citizen suits in accordance with the CWA and the California Water Code.

6. THE SPECIFIC ACTION BY THE STATE OR REGIONAL WATER BOARDS REQUESTED:

The City seeks an Order by the State Water Board that will revise the Permit, or remand the Permit to the Regional Water Board with direction for revisions, as follows:

A. Delete the effluent limitations for 2,3,7,8-TCDD TEQ or reconsider them in light of the limitations of the bioaccumulation objective to controllable water quality factors, and in light of the requirements of the Basin Plan and Water Code sections 13263 and 13241;

B. Delete the compliance schedules for dioxin-TEQ; and

C. Delete reference to a mass offset program until and unless a technically realistic and legally sound program has been developed and approved by the State Water Board or Regional Water Board.

7. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL ISSUES RAISED IN THIS PETITION:

The City's preliminary statement of points and authorities is set forth in Section 4 above. The City reserves the right to supplement this statement upon receipt and review of the administrative record.

8. A STATEMENT THAT THE PETITION HAS BEEN SENT TO THE APPROPRIATE REGIONAL WATER BOARD:

A true and correct copy of the Petition was mailed by First Class mail on September 11, 2008, to the Regional Water Board at the following address:

Bruce Wolfe, Executive Officer
California Regional Water Quality Control Board,
San Francisco Region
1515 Clay Street, Suite 1400
Oakland, California 94612

9. A STATEMENT THAT THE SUBSTANTIVE ISSUES OR OBJECTIONS RAISED IN THE PETITION WERE RAISED BEFORE THE REGIONAL WATER BOARD:

The substantive issues and objections in this Petition were raised before the Regional Water Board in written comments, dated July 17, 2008.

Dated: September 11, 2008

Respectfully submitted,

SOMACH, SIMMONS & DUNN

By Roberta L Larson
Roberta Larson
Special Counsel for Petitioner
CITY OF MILLBRAE

Exhibit A

Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board

San Francisco Bay Region

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http://www.waterboards.ca.gov/sanfranciscobay

Arnold Schwarzenegger
Governor

ORDER NO. R2-2008-0071
NPDES NO. CA0037532

The following Discharger is subject to waste discharge requirements set forth in this Order.

Table 1. Discharger Information

Discharger	City of Millbrae and North Bayside System Unit (NBSU)
Name of Facility	City of Millbrae Water Pollution Control Plant and collection system
Facility Address	400 East Millbrae Avenue
	Millbrae, CA 94030
	San Mateo County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the City of Millbrae Water Pollution Control Plant and the North Bayside System Unit from the discharge point identified below is subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
E-002	POTW Effluent	37 °, 39', 55" N	122 °, 21', 41" W	Lower San Francisco Bay

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	**August 13, 2008**
This Order shall become effective on:	**October 1, 2008**
This Order shall expire on:	**September 30, 2013**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**180 days prior to the Order expiration date**

IT IS HEREBY ORDERED, that this Order supersedes Order No. 01-143 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **August 13, 2008**.

Digitally signed by Bruce Wolfe
Date: 2008.08.19 13:50:31
-07'00'

Bruce H. Wolfe, Executive Officer

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Tables

Attachments

I. FACILITY INFORMATION

The following Discharger is subject to the waste discharge requirements set forth in this Order:

Table 4. Facility Information

Discharger	City of Millbrae and North Bayside System Unit
Name of Facility	City of Millbrae Water Pollution Control Plant
Facility Address	400 East Millbrae Avenue Millbrae, CA 94030 San Mateo County
Facility Contact, Title, and Phone	Joseph Magner, Superintendent, (650) 259-2388
Mailing Address	621 Magnolia Avenue Millbrae, CA 94030
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	3.0 million gallons per day (MGD) (average daily dry weather design flow), 9.0 MGD (peak daily wet weather design flow)

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Regional Water Board), finds:

A. Background. The City of Millbrae Water Pollution Control Plant (Millbrae WPCP) and the North Bayside System Unit (NBSU) (hereinafter the Discharger) is currently discharging under Order No. 01-143 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037532. The Discharger submitted a Report of Waste Discharge dated March 24, 2006, and applied to renew its NPDES permit to discharge up to 3.0 million gallons per day (MGD) of treated wastewater from the Millbrae WPCP.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates the Millbrae WPCP, which provides secondary treatment of domestic and commercial wastewater collected from the City of Millbrae (population 22,000). The Millbrae WPCP has an average dry weather design treatment capacity of 3.0 MGD and can treat up to 9 MGD during wet weather.

Wastewater treatment processes at the Millbrae WPCP include grinding, primary sedimentation in rectangular clarifiers, biological activated sludge treatment, secondary clarification, disinfection with sodium hypochlorite, and final effluent skimming. Electricity is generated for on-site use from methane gas produced by sludge digesters. Standby generators supply power to Millbrae WPCP systems during power outages. Recycled water is produced for restricted use applications.

Chlorinated secondary effluent is discharged through Outfall E-001 to the North Bayside System Unit (NBSU) force main. The effluent is dechlorinated at the City of South San Francisco Water Quality Control Plant prior to discharge into Lower San Francisco Bay, a water of the State and the United States, through the NBSU outfall (Outfall E-002). Outfall E-002 is a submerged diffuser

located northeast of Point San Bruno about 5,300 feet offshore at a depth of 20 feet below mean lower low water (37 degrees, 39 minutes, 55 seconds N latitude and 122 degrees, 21 minutes, 41 seconds W longitude). The NBSU is a joint powers authority and includes the Cities of Burlingame, Millbrae, South San Francisco and San Bruno, and San Francisco International Airport (both industrial and domestic waste treatment plants).

Biosolids collected from the wastewater treatment process are thickened in a gravity thickener, anaerobically digested, and dewatered by a belt filter press. On average, the Millbrae WPCP generates 186 dry metric tons of Class B biosolids per year. Approximately 90 dry metric tons of dewatered biosolids are beneficially reused at various land application sites. The remaining biosolids are disposed of at the Potrero Hills and Altamont landfills.

Attachment B provides a map of the area around the Millbrae WPCP. Attachment C provides a flow schematic of the Millbrae WPCP.

C. **Legal Authorities.** This Order is issued pursuant to Clean Water Act (CWA) section 402 and implements regulations adopted by the United States Environmental Protection Agency (USEPA) and Chapters 5.5, Division 7 of the California Water Code (CWC) (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from the Millbrae WPCP to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the CWC (commencing with section 13260).

D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F) containing background information and rationales for Order requirements is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through H are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA.

F. **Technology-Based Effluent Limitations.** CWA Section 301(b) and NPDES regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. A detailed discussion of technology-based effluent limitation development is included in the Fact Sheet.

G. **Water Quality-Based Effluent Limitations.** CWA section 301(b) and NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant that has no numeric criterion or objective, water quality-based effluent limitations (WQBELs) must be

established using (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. **Water Quality Control Plans.** *The Water Quality Control Plan for the San Francisco Bay Basin* (the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Water Board), USEPA, and the Office of Administrative Law, as required. Requirements of this Order implement the Basin Plan.

The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of the marine influence on receiving waters of San Francisco Bay, total dissolved solids levels in San Francisco Bay usually (and often significantly) exceed 3,000 milligrams per liter (mg/L) and thereby meet an exception to State Water Board Resolution No. 88-63. Therefore, the MUN designation is not applicable to Lower San Francisco Bay.

Beneficial uses applicable to Lower San Francisco Bay are as follows.

Table 5. Basin Plan Beneficial Uses of Lower San Francisco Bay

Discharge Point	Receiving Water Name	Beneficial Uses
E-002	Lower San Francisco Bay	Industrial Service Supply (IND) Navigation (NAV) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Ocean, Commercial and Sport Fishing (COMM) Wildlife Habitat (WILD) Preservation of Rare and Endangered Species (RARE) Fish Migration (MIGR) Shellfish Harvesting (SHELL) Estuarine Habitat (EST)

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR

and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on an existing Discharger's request and demonstration that it is infeasible for it to achieve immediate compliance with an effluent limitation derived from a CTR criterion, a compliance schedule may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order includes compliance schedules and discharge specifications. A detailed discussion of the basis for the compliance schedules and discharge specifications is included in the Fact Sheet.

L. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

M. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on oil and grease, pH, total suspended solids (TSS), and carbonaceous biochemical oxygen demand (CBOD). Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements as necessary to meet water quality standards.

N. **Antidegradation Policy**. NPDES regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. **Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in Order No. 01-143. As discussed in detail in the Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

P. **Monitoring and Reporting.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

Q. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

R. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet.

S. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner different from that described in this Order is prohibited.

B. The average dry weather flow, as measured at station E-001 described in the attached Monitoring and Reporting Plan (MRP) (Attachment E), shall not exceed 3.0 MGD. The average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

C. Discharge of wastewater into Lower San Francisco Bay at any point where it does not receive an initial dilution of at least 10:1 is prohibited.

D. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in 40 CFR 122.41(m)(4) and in section A.13 of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (Attachment G).

E. Any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point E-001

1. Effluent Limitations for Specific Pollutants

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point E-001 with compliance measured at Monitoring Location E-001 as described in the attached MRP (Attachment E).

Table 6. Effluent Limitations – Discharge Point E-001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	10	---	20	---	---
pH [1]	standard units	---	---	---	6.0	9.0
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---
Carbonaceous Biochemical Oxygen Demand (CBOD)	mg/L	25	40	---	---	---
Ammonia (as Nitrogen)	mg/L N	110	---	160	---	---
Chlorine, Total Residual	mg/L	---	---	---	---	0.0 [2]
Copper [3], [4], [5]	µg/L	71	---	100	---	---
Cyanide [3], [5]	µg/L	20	---	44	---	---
Dioxin-TEQ [3], [5], [6]	µg/L	1.4×10^{-8}	---	2.8×10^{-8}	---	---

[1] If the Discharger monitors pH continuously, pursuant to 40 CFR 401.17, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

[2] This requirement is defined as below the limit of detection in standard test methods as defined in the latest edition of *Standard Methods for the Examination of Water and Wastewater*. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, sodium hypochlorite, and sodium bisulfite dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff will conclude that these chlorine residual exceedances are false positives and are not violations of the Order's Total Residual Chlorine limit. Chlorine residual compliance may be demonstrated by monitoring at the NBSU common outfall (E-002).

[3] a. Limitations for toxic pollutants apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).

b. All metals limitations are expressed as total recoverable metal.

[4] Alternate Effluent Limits for Copper:

a. If copper Site Specific Objectives (SSOs) for the receiving water become legally effective, resulting in an adjusted saltwater Criterion Continuous Concentration (CCC) of 2.5 micrograms per liter (µg/L) and a Criterion Maximum Concentration (CMC) of 3.9 µg/L, as documented in the Basin Plan Amendment Resolution R2-2007-0042 and in *Copper Site-Specific Objectives in San Francisco Bay: Proposed Basin Plan Amendment and Draft Staff Report* (dated June 6, 2007), then upon their effective date, the following limitations shall supersede those copper limitations listed in Table 7 (the rationale for these effluent limitations can be found in the Fact Sheet [Attachment F]).

Maximum Daily Effluent Limitation (MDEL) = 77 µg/L, and Average Monthly Effluent Limitation (AMEL) = 53 µg/L.

b. If a different copper SSO for the receiving water is adopted, alternate WQBELs based on the SSO will be determined after the SSO effective date.

[5] A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level for that constituent. As outlined in Section 2.4.5 of the SIP, Table 7, below, indicates the Minimum Level (ML) for compliance determination purposes. An ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is

equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

(6) Final effluent limitations for dioxin toxic equivalents (dioxin-TEQ) shall become effective in accordance with the compliance schedule established by Section VI.C.7 of this Order.

b. **CBOD and TSS 85 Percent Removal:** The concentration-based average monthly percent removal of CBOD and TSS shall not be less than 85 percent.

c. **Fecal Coliform Bacteria:** The treated wastewater shall meet the following bacteriological limits:

(1) The geometric mean value for all samples analyzed for fecal coliform bacteria within each calendar month shall not exceed a Most Probable Number (MPN) of 200 organisms per 100 milliliters (MPN/100 mL); and

(2) No more than ten percent (10%) of all samples collected within each calendar month shall exceed a fecal coliform bacteria level of 400 MPN/100 mL.

d. **Enterococci Bacteria:** The monthly geometric mean enterococci bacteria concentration shall not exceed 35 MPN/100 mL.

Table 7. Minimum Levels for Pollutants with Effluent Limitations

Parameter	Minimum Level	Units
Copper	2	µg/L
Cyanide	5	µg/L
2,3,7,8-TCDD	5	pg/L
1,2,3,7,8-PeCDD	25	pg/L
1,2,3,4,7,8-HxCDD	25	pg/L
1,2,3,6,7,8-HxCDD	25	pg/L
1,2,3,7,8,9-HxCDD	25	pg/L
1,2,3,4,6,7,8-HpCDD	25	pg/L
OCDD	50	pg/L
2,3,7,8-TCDF	5	pg/L
1,2,3,7,8-PeCDF	25	pg/L
2,3,4,7,8-PeCDF	25	pg/L
1,2,3,4,7,8-HxCDF	25	pg/L
1,2,3,6,7,8-HxCDF	25	pg/L
1,2,3,7,8,9-HxCDF	25	pg/L
2,3,4,6,7,8-HxCDF	25	pg/L
1,2,3,4,6,7,8-HpCDF	25	pg/L
1,2,3,4,7,8,9-HpCDF	25	pg/L
OCDF	50	pg/L

3. **Acute Toxicity:**

   a. Representative samples of the effluent at Discharge Point E-001 shall meet the following limits for acute toxicity: Bioassays shall be conducted in compliance with Section V.A of the MRP (Attachment E).

      The survival of organisms in undiluted combined effluent shall be:

      - an eleven (11) sample median value of not less than 90 percent survival, and
      - an eleven (11) sample 90 percentile value of not less than 70 percent survival.

   b. These acute toxicity limitations are further defined as follows:

      11 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

      90th percentile: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

   c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species based on the most recent screening test results. Bioassays shall be conducted in compliance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,* currently 5th Edition (EPA-821-R-02-012).

   d. If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is in compliance with effluent limits, then such toxicity does not constitute a violation of this effluent limitation.

4. **Chronic Toxicity**

   a. Compliance with the Basin Plan narrative chronic toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the treated final effluent at Discharge Point E-001 meeting test acceptability criteria and Section V.B of the MRP (Attachment E). Failure to conduct the required toxicity tests or a TRE within a designated period shall result in the establishment of effluent limitations for chronic toxicity.

      (1) Conduct routine monitoring.

      (2) Accelerate monitoring after exceeding a single-sample maximum of 10 chronic toxicity units (TUc), consistent with Table 4-5 of the Basin Plan for dischargers monitoring chronic toxicity annually. Accelerated monitoring shall consist of monthly monitoring.

(3) Return to routine monitoring if accelerated monitoring does not exceed the "trigger" in (2), above.

(4) If accelerated monitoring confirms consistent toxicity above the "trigger" in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) in accordance with a workplan submitted in accordance with Section V.B.3 of the MRP (Attachment E) that incorporates any and all comments from the Executive Officer.

(5) Return to routine monitoring after appropriate elements of the TRE workplan are implemented and either the toxicity drops below the "trigger" level in (2), above, or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

b. Test Species and Methods

The Discharger shall conduct routine monitoring with the test species and protocols specified in Section V.B of the MRP (Attachment E). The Discharger shall also perform Chronic Toxicity Screening Phase monitoring as described in the Appendix E-1 of the MRP (Attachment E). Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in Appendices E-1 and E-2 of the MRP (Attachment E).

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharges shall not cause the following in Lower San Francisco Bay:

   a. Floating, suspended, or deposited macroscopic particulate matter or foams;

   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil and other products of petroleum origin; or

   e. Toxic or other deleterious substances to be present in concentrations or quantities that will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or that render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State within one foot of the water surface: